

Special Issue

Membrane Processes for Liquid and Gas Separations: Opportunities and Challenges

Message from the Guest Editors

Separation processes play a significant role in industry and daily life due to their three primary functions: concentration, fractionation, and purification. Although effective separation can be achieved by the utilization of traditional separation technologies, such as condensation and crystallization, the accompanying high energy consumption in the actual separation processes cannot be ignored. Membrane processes, which are proven to be a “minus” strategy in addressing energy and environmental challenges, have been widely used in liquid and gas separation. Compared with traditional separation technologies, membrane separation processes are highly advantageous, allowing energy to be saved in the separation of a wide range of mixtures. Meanwhile, considering its smaller carbon footprint, convenient and compact operation and reduced secondary pollution, the membrane process offers great potential for separation and purification.

Keywords

- Membrane processes
- Water and wastewater treatment
- Water reclamation
- Gas separation
- Carbon capture

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Message from the Editor-in-Chief

You are cordially invited to contribute a research article or a comprehensive review for consideration and publication in *Membranes* (ISSN 2077-0375). *Membranes* is an international, peer-reviewed open access journal of membrane technology published monthly online by MDPI. The journal covers the broad aspects of the science and technology of both biological and non-biological membranes, including membrane dynamics and the preparation and characterization of membranes and their applications in water, environment, energy, and food industries. Articles contributing to better understanding of transport processes in all types of membranes are also welcome. The scientific community and the general public have unlimited and free access to the content as soon as it is published. We would be pleased to welcome you as one of our authors.

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